DRAFT

WASTE ROCK AREAS WORK PLAN

AUGUST 20, 2002

PREPARED FOR:

Atlantic Richfield Company
307 EAST PARK STREET, SUITE 400
ANACONDA, MONTANA 59711

PREPARED BY:

BROWN AND CALDWELL
Carson City, Nevada

Table of Contents

Section **Page**

SECTION 1.0 INTRODUCTION 1
1.1 Location 1
1.2 Hydrogeologic Setting 2
1.3 Previous Monitoring and Data Acquisition 2
1.4 Data Quality Objectives 4

SECTION 2.0 BACKGROUND INFORMATION 6
2.1 South Waste Rock Area 6
2.2 W-3 Waste Rock Area 8
2.3 S-32 (Sulfide Ore) Waste Rock Area 9
2.4 Summary of Current Conditions 9

SECTION 3.0 WORK PLAN 10
3.1 Waste Rock Characterization 11
3.2 Data Collection and Analysis Procedures 12
3.3 Site Job Safety Analysis 14

SECTION 4.0 REFERENCES CITED 17

Table of Contents -- Continued

List of Figures

Figure 1 Site Location
Figure 2 Waste Rock Areas
Figure 3 Conceptual Site Model Flow Diagram
Figure 4 South Waste Rock Area
Figure 5 S-32 and W-3 Waste Rock Areas

List of Tables

Table 1 Summary of Work Plan Procedures
Table 2 Waste Rock Analytical Results
Table 3 Whole-Rock Analyte List

List of Appendices

Appendix A. Existing Waste Rock Analytical Results
Appendix B. Site Photographs
Appendix C. Job Safety Analysis Forms

SECTION 1.0
INTRODUCTION

Atlantic Richfield Company has prepared this Draft Waste Rock Areas Work Plan (Work Plan) to conduct field investigations that will support an evaluation of current human health and ecological risk associated with, and to support planning for permanent closure of, three Waste Rock Areas (WRAs) within the Yerington Mine Site. This Work Plan is being conducted pursuant to the Closure Scope of Work (SOW). As stated in the SOW (Brown and Caldwell, 2002), the Waste Rock Work Plan will include "materials inventory and static testing". Results of the proposed site investigation activities presented in this Work Plan will be compiled and presented in a Data Summary Report.

The remainder of Section 1.0 of this Work Plan describes the location and hydrologic setting of the Waste Rock Areas, previous sampling and analytical results, and describes the data quality objectives (DQOs) for this Work Plan in more detail. Section 2.0 presents information about the construction and operational history of the WRAs, and a description of their current status. Section 3.0 presents the details of the site investigation activities including proposed sampling locations, sampling protocols, and quality assurance and quality control (QA/QC) objectives. Section 3.0 of this Work Plan also presents a task-specific Job Safety Analysis in the context of a more comprehensive Health and Safety Plan. Section 4.0 lists references cited in this Work Plan.

1.1 Location

The Yerington Mine Site is located west and northwest of the town of Yerington in Lyon County, Nevada (Figure 1). The WRAs are located north and south of the Yerington Pit, as shown in Figure 2, and consist of three geographically distinct topographic features described below:

<u>South WRA</u> The largest Waste Rock Area occupies the majority of mining-disturbed land south of the Yerington open pit.

W-3 WRA The W-3 Waste Rock Area consists of a contiguous body of material, an asphalt-lined area to the northeast, and various waste rock materials surrounding the heap. The W-3 WRA was partially mined by Arimetco for leaching in the Phase I, II, III, and IV-Slot Heap Leaches. This WRA lies north of the Phase IV-Slot Heap Leach and east of the Arimetco Electrowinning Plant, and extends to near the Weed Heights public access road.

S-32 WRA The S-32 Sulfide Waste Rock Area generally consists of low-grade material stockpiled west of the Phase I/II Heap, and south of the Arimetco Plant Site.

1.2 Hydrogeologic Setting

The principal source of water in the Yerington area of Mason Valley is the Walker River (Huxel, 1969). The East and West Walker Rivers originate in the Sierra Nevada mountain range and merge south of the mine site, from where the Walker River flows northward through the valley to Walker Gap. From Walker Gap, it turns eastward and then southeastward to Weber Reservoir and ultimately to its terminus, Walker Lake. The Walker River is the primary source of natural recharge to the alluvial groundwater flow system that underlies the mine site, given that recharge from precipitation is very low (the annual average precipitation rate in the area is 5.46 inches per year; Huxel, 1969).

The native ground beneath the WRAs consists of unconsolidated alluvial fan deposits derived by erosion of the uplifted mountain block of the Singatse Range and fluvial (flood-plain) sediments deposited by the Walker River. A detailed assessment of groundwater conditions at the Yerington Mine Site is the subject of a Groundwater Conditions Work Plan, a companion to this Waste Rock Work Plan. The assessment of groundwater flow and quality beneath and down-gradient of the mine site, including the WRAs, will be discussed in the companion Work Plan.

1.3 Previous Monitoring and Data Acquisition

Existing information for the WRAs is limited, and consists of incidental references in design or evaluation records from other mine units. Based on limited materials testing results, waste rock materials at the site appear to be similar in lithology and mineralogy, history of exposure and, with the exception of the portion of the W-3 WRA leached by Anaconda, treatment and handling history. As a result, geochemical evaluations proposed in this Work Plan are not expected to have significantly different results from the limited historical records. The remainder of Section 1.3 introduces existing information sources and discusses their significance to the site investigation activities proposed in this Work Plan.

WRA Material Geochemistry

The U.S. Environmental Protection Agency (Expanded Site Inspection; EPA, 2000) collected waste rock samples from the S-32 and W-3 WRAs as part of an initial CERCLA evaluation of the mine site. Sample T-11 was submitted as a duplicate of sample T-2 from the S-32 WRA, and sample T-4 was collected from the W-3 WRA. Whole-rock analytical results are provided in Appendix A, and are summarized in Table 2. General background soil values are also presented in Table 2 for comparison. With the exception of copper, all major constituents analyzed from the waste rock samples are consistent with representative soils metals concentrations reported by Shacklette and Boerngen (1984). The abundance of copper from the waste rock samples is not unexpected, given that the mineralized bedrock in the WRAs was enriched in copper.

During engineering design of Arimetco's Phase IV-Slot Heap, a sample of proposed leach material from the W-3 WRA was subjected to the Meteoric Water Mobility Procedure (MWMP), and static testing (i.e., acid/base accounting or ABA). The results of these tests are included in Appendix A. The ABA results indicate that this material is slightly acid consuming (i.e., buffering), with a net neutralization potential (NNP) between 0 and 10.

Physical Stability

Engineering documents prepared for Arimetco's Phase IV-Slot Heap Leach Pad included an evaluation of bulk slope stability, recommended constructed slope angles and benches, and soil strength properties. Because waste rock materials are identical in geologic character and grain size distribution to the heap materials, these results may be generalized for all WRAs for an evaluation of physical stability. Data such as in-place angle of repose may also be used in evaluating slope stability for the WRAs.

1.4 Data Quality Objectives

The Data Quality Objectives (DQOs) for field sampling and analytical activities described in this Work Plan include the collection of appropriate data to support the:

- Assessment of current ecological and human health risk from exposed WRA materials to possible down-wind and down-gradient receptors;
- Development and evaluation of closure alternatives for the WRAs.

A four-step DQO process was utilized to develop the activities described in this Work Plan. The DQOs will ensure that data of sufficient quality and quantity are collected to meet the project objectives. The four steps include:

- Step 1. State the Problem;
- Step 2. Identify the Decision;
- Step 3. Identify the Inputs to the Decision; and
- Step 4. Define the Boundaries of the Study.

The problem statement (Step 1) is as follows: "It is unknown whether WRA materials may have the potential to create a risk to human health and the environment.

Step 2 of the DQO process (Identify the Decision) asks the key question that this Work Plan is attempting to address: "What monitoring, sampling and analytical activities for the WRAs will serve to evaluate the potential for ecological and human health risk, and support closure of the Yerington Mine site?" The field monitoring and sample collection and analysis activities proposed in this Work Plan will be integrated with previous investigations and analytical results to answer this question. The criteria necessary to determine if the proposed Work Plan activities will answer this question include:

- Will the collected data adequately document the potential source characteristics and potential migration pathways of solids and liquids associated with the WRAs;

- Will the collected data support an evaluation of environmental pathway processes that could affect the fate and transport of these materials; and
- Will the collected data provide an appropriate baseline to evaluate closure alternatives for the WRAs (e.g. chemical and physical stability of solid materials).

Step 3 of the DQO process (Identify the Inputs to the Decision) identifies the kind of information that is needed to address the question posed under Step 2. Relevant historical and anecdotal information includes limited detailed knowledge of WRA construction, previous field monitoring and analytical results, migration pathways and down-gradient receptors. The information obtained from the proposed site investigation activities will provide an adequate basis to address the other criteria of the DQO Process.

Step 4 of the DQO process (Define the Boundaries of the Study) defines the spatial and temporal aspects of the field monitoring, sampling and analytical activities proposed in this Work Plan. The field and analytical activities described in this Work Plan will be conducted for the three identified WRAs shown on Figure 2 during 2002.

The DQO steps described above will be consistent with the Conceptual Site Model (CSM), currently under review by the Yerington Technical Work Group (YTWG). The flow diagram for the CSM is reproduced as Figure 3 of this Work Plan. The WRAs are identified as potential sources within the "surface mine units and process areas" category in Figure 3.

SECTION 2.0

BACKGROUND INFORMATION

The WRAs shown in Figure 2 were constructed in two major stages during operations conducted by the Anaconda Mining Company, with possible earlier materials deposition and later modifications by Arimetco and, possibly, other private entities. The WRAs include two principal material types:

- Alluvial overburden removed to allow open-pit mining of waste and ore; and
- Bedrock consisting of variably altered and mineralized quartz monzonite (generally classified as either oxide or sulfide).

Evaluation of alluvial materials will be conducted as part of a companion Cover Materials Work Plan, and will not be discussed further in this Work Plan. The bedrock materials consist of several lithologic variations of quartz monzonite (Proffett and Dilles, 1984). Lithologic and mineralogic gradations of the quartz monzonite host rock occur, but are not significant to this Work Plan. The remainder of Section 2.0 includes a discussion of each WRA organized under the following headings:

- Construction and Operation
- Land Status
- Physical Description

2.1 South Waste Rock Area

<u>Construction and Operation</u>

The South WRA is the oldest of the three areas, and may include minor amounts of alluvium removed during exploration or limited lode mining as early as the 19th century. The South WRA was used to store waste rock from various sources until 1993 (Joe Sawyer; pers. comm., 2002). Based on field observations, described below, the South WRA appears to have received the majority of its material in two phases:

- Stripping phase in which alluvium was removed; and
- Extraction and placement of relatively low-grade bedrock materials adjacent to the open pit.

Land Status

The South WRA is located almost entirely on land controlled by the BLM. Portions near the Yerington Pit are located on private land.

Physical Description

The South WRA covers a ground area of approximately 388 acres. Its elevation ranges from approximately 4,600 feet above mean sea level (amsl) along its west side to approximately 4,750 feet amsl near its east side. The side slopes are generally at the angle-of-repose (about 1.4H:1V), and have a maximum height of 160 feet in the southeast corner of the WRA. Portions of the top of the area are generally flat, with a surface area of approximately 294 acres (see Appendix B, Photos 1 and 2). The top surfaces are sloped at 2 to 5 percent to the north.

The South WRA appears to have been constructed in two phases, probably segregated by age. The first phase includes the lower flat area at its south end, where vegetation is well established (roughly estimated at 50 percent cover consisting of rabbit brush up to 6 feet in diameter, and several species of bunch grasses and other shrubs). Surface materials consist of weathered quartz monzonite (e.g., run-of-mine angular cobbles to silt size). The second phase of the South WRA is characterized by similar but sparser vegetation, covering approximately 5 to 20 percent of the surface area.

Particle size ranges from approximately 8-inch plus to silt-sized. A brief inspection of field conditions, and a review of the topographic map of the South WRA, indicates relatively stable slopes.

2.2 W-3 Waste Rock Area

Construction and Operation

Arimetco's 1993 engineering design for the Phase IV-Slot Heap Leach Pad described the W-3 WRA as a "low-grade oxide copper ore that is most often described on maps as tailings". According to

Arimetco's 1993 design report, this WRA was expanded and heightened over a period of nearly twenty years.

Following acquisition of the property in 1989, Arimetco mined an area termed the "Slot" and hauled this material to constructed heap leach pads, the subject of a companion Work Plan. The Slot was mined to a depth close to original surface topography. Arimetco did not complete the planned excavation of the W-3 WRA, leaving it in its current configuration (Figure 5).

Land Status

The W-3 WRA is located almost entirely on land controlled by the BLM. A portion of the southwest corner, near the Arimetco Plant Site is located on private land.

Physical Description

What remains of the W-3 WRA, after re-mining by Arimetco to supply leach materials for the Phase IV-Slot Heap, appears to cover an area of approximately 84 acres. Its elevation ranges from approximately 4,404 feet amsl at the southeast corner of the entrance to the Slot, to approximately 4,646 feet amsl in the center of the WRA. The side slopes are slightly benched, occur generally at the angle-of-repose (i.e., about 1.4H:1V), and have a maximum height of 210 feet on the northwest face (see Appendix B, Photo 3). The top is generally flat, with a surface area of approximately 49 acres. Stormwater may either pond on the surface of the WRA, or run off to an adjacent slope.

The material is a quartz monzonite with varying degrees of surface oxide staining and, based on visual inspection, appears to be completely oxidized. The materials appear homogeneous with particle sizes ranging from approximately 8-inch plus to silt-sized. Field observations and a review of area topography maps indicate relatively stable slopes.

2.3 S-32 (Sulfide Ore) Waste Rock Area

Construction and Operation

Little is known about the history of waste rock materials in the S-32 WRA. This WRA is variably identified on historical maps located in Arimetco files at the mine site as "Sulfide Tailings", "Low-Grade Sulfide Ore", and "S-32 Waste Rock".

Land Status

The S-32 (Sulfide Ore) WRA is located entirely on private land.

Physical Description

The S-32 WRA covers a ground area of approximately 19 acres. Its elevation ranges from approximately 4,468 feet amsl at the northeast corner near the Arimetco Plant Site, to approximately 4,594 feet amsl at the southern end of the WRA. A 100-foot wide haul road provides access to the top surface of the S-32 WRA. The side slopes are generally at the angle-of-repose (1.4H:1V), and have a maximum height of 110 feet at the northeast corner. The top is generally flat with a total surface area of approximately 8 acres, including the haul road. Stormwater may either pond on the surface of the WRA, or run off to an adjacent slope.

The material is a quartz monzonite with minimal surface oxide staining, and appears to have free been thoroughly oxidized. The material appears to be homogeneous with particle sizes that range from approximately 8-inch plus to silt-sized. Field observations and topographic maps indicate relatively stable slopes.

2.4 Summary of Current Conditions

The Waste Rock Areas have been inactive since approximately 1978, except for Arimetco's mining of the W-3 WRA for heap leach materials. After filing for bankruptcy in 1997, Arimetco abandoned its operations at the Yerington Mine Site in January 2000. Current activities include fluid management, solution monitoring, and general care and maintenance at the mine site.

SECTION 3.0
WORK PLAN

Atlantic Richfield proposes to conduct site investigations of the WRAs to characterize the waste rock materials to assess their potential to create a human health or ecological risk, and for site closure planning. All site investigations, and related quality assurance/quality control (QA/QC) procedures, will be consistent with the DQOs described in Section 1.4. This Work Plan provides for the evaluation of the following general characteristics of each WRA, and its associated process components:

- Material Volumes
- Material Geochemical Characteristics
- Material Geotechnical Characteristics

The geochemistry of WRA materials will be an important factor in the evaluation of closure options because of the potential for leachate from waste rock materials to degrade waters of the State, or for the materials to pose a human health or ecological risk as defined in Figure 3. Additionally, the agricultural properties of the materials (e.g., availability of nutrients needed by revegetation or volunteer vegetation, and physical parameters such as grain size, gradation and water retention) will determine whether it can be potentially used directly as a growth medium.

In order to demonstrate physical stability of the WRAs relative to final post-closure conditions, material characteristics will have to be evaluated to support slope stability and stormwater management design. Information already available from the Phase IV Heap Leach engineering documents (Arimetco, 1993) is expected to suffice for physical stability evaluation.

Prior to the start of work, field personnel will conduct a health and safety meeting to review the Site Health and Safety Plan and to verify personal training certification. Copies of training certificates and attendance logs from the meeting will be obtained. All work will be conducted in accordance with the

Site Health and Safety Plan, and with the JSA provided in Section 3.4.

3.1 WRA Characterization

Material Volumes

The quantity of material contained in each of the WRAs will be calculated by interpolating adjacent grades to estimate original ground topography, and comparing this surface with a Digital Terrain Model (DTM) based on topography generated by photogrammetric methods and dated August 2001.

Material Geotechnical and Geochemical Characteristics

Given the generally homogeneous nature of the materials observed on the WRAs, Atlantic Richfield anticipates that the proposed sampling locations shown in Figures 4 and 5 will be the final number of samples collected for geotechnical and geochemical characterization of the WRAs. Composite sampling methods will be used to develop representative data for each WRA.

The potential for waste rock materials to generate fugitive dust, and the capacity of the material to retain moisture will be evaluated. Samples will be collected for laboratory analysis of grain size distribution (ASTM D-422 testing method). The grain size distribution data will be used to estimate the field capacity, wilting point, and saturated hydraulic conductivity of the WRA materials. This information may be used to evaluate the moisture storage capacity as a component of surface hydrology analysis, and in characterization of the WRA materials for use as a growth medium.

Samples collected from the WRAs will also be used for whole-rock analysis to confirm the results of EPA's Expanded Site Investigation, conducted in 2000. The samples will also be used for agricultural analysis and acid-base accounting (ABA). Figures 4 and 5 indicate the proposed sample locations for the South WRA, and the S-32 and W-3 waste rock areas, respectively. Sample locations are based on observed differences in waste rock mineralogy and apparent phase of deposition. Proposed sample locations may be modified based on actual field conditions observed during sampling.

3.2 Data Collection and Analysis Procedures

Procedures for data collection and analysis will follow the specifications and standard operating procedures (SOPs) described in this section. These procedures will adhere to QA/QC methods to ensure that the quality and quantity of the analytical data obtained during the field activities are sufficient to support the DQOs. QA/QC issues include:

- Detection limit and laboratory analytical level requirements;
- Selection of appropriate levels of precision, accuracy, representiveness, completeness, and comparability for the data and any specific sample handling issues; and
- Identification of confidence levels for the collected data.

Solids Sampling

WRA material will be sampled by removing, with hand tools (e.g., disposable plastic trowels or shovels), the material exposed to direct sunlight (e.g., up to one foot below the surface), and excavating from a single sample location approximately 2.5 gallons of material. This material will the shaken in a 5-gallon bucket to eliminate strata variation effects, and the following splits will be obtained by hand-sorting to eliminate oversized material:

- For whole-rock analysis and obtain a 2 kg (approximately 1 quart sample) in a clean re-sealable baggy.
- For Agricultural and ABA analyses, obtain a minimum of two (2) 1 kg (approximately 1 pint samples) in clean re-sealable baggies.

After obtaining these splits for geochemical analysis, the 5-gallon bucket will be filled with material from the same location, including surface material, for geotechnical analysis (particle size distribution). Each sample will be sealed and labeled with QA/QC procedures described below prior to shipment to the analytical laboratory.

Duplicate samples will be collected at a frequency of one in eight-to-ten samples. Duplicate samples will be collected by filling the containers for each analysis at the same time the original sample is collected. Each sample from a duplicate set will have a unique sample number labeled in accordance with the identification protocol, and the duplicates will be sent "blind" to the lab. For quality assurance purpose, no special labeling indication of the duplicate will be provided.

Solids Analyses

For each of the sample locations shown in Figures 4 and 5, waste rock will be analyzed for whole-rock chemistry, acid base accounting (ABA), agricultural parameters and geotechnical characteristics. The constituents to be analyzed for whole-rock chemistry are listed in Table 2. Samples for the evaluation of agricultural properties will be analyzed for Nitrogen, Phosphorus and Potassium (NPK) concentrations; Boron, Chlorine, Calcium, Magnesium and Sodium concentrations; and the calculation of the Sodium Absorption Ratio (SAR).

Sample Identification and Preservation

Sample labels will be completed and attached to each laboratory sample container after each sample is collected. Strict attention will be given to ensure that each sample label corresponds to the collection sequence number marked on the bottle prior to sample collection. The labels will be filled out with a permanent marker and will include the following information:

- Sample identification
- Sample date
- Sample time
- Analyses to be performed
- Person who collected sample

Each sample will be tracked according to a unique sample field identification number assigned when the sample will be collected. This field identification number consisted of two parts:

- Sampling location
- Collection sequence number

For example, the sample collected on the W-3 WRA at the second location sampled will be labeled: WRAW-3002. Duplicate samples will be labeled in the same fashion, with no indication of their contents. For example, the duplicate sample to the one stated above might be labeled: WRAW-3003.

Sample Handling and Transport

The QA objectives for the sample-handling portion of the field activities are to verify that packaging and shipping are not introducing variables into the sampling chain that could provide any basis to question the validity of the analytical results. In order to fulfill these QA objectives, duplicate QC samples will be used as described below. If the analysis of any QC samples indicates that variables are being introduced into the sampling chain, then the samples shipped with the questionable QC sample will be evaluated for the possibility of contamination.

3.3 Site Job Safety Analysis

A site-specific Job Safety Analysis (JSA) for this Work Plan is attached as Appendix C, in accordance with Atlantic Richfield Health and Safety protocol and the Brown and Caldwell Yerington Mine Site Health and Safety Plan (SHSP). The SHSP identifies, evaluates, and prescribes control measures for safety and health hazards, in addition to providing for emergency response at the Yerington Mine site. SHSP implementation and compliance will be the responsibility of Brown and Caldwell, with Atlantic Richfield taking an oversight and compliance assurance role. Any changes or updates will be the responsibility of Brian Bass with Brown and Caldwell, with review by Atlantic Richfield Safety Representative Lorri Birkenbuel. Three copies of this plan will be maintained. One copy will be located at the site, one copy will be located in Atlantic Richfield's Anaconda office, and one copy will be located in the Brown and Caldwell office. The SHSP includes:

- Safety and health risk or hazard analysis;
- Employee training records;
- Personal protective equipment (PPE);
- Medical surveillance;
- Site control measures (including dust control);

- Decontamination procedures;
- Emergency response; and
- Spill containment program.

The SHSP includes a section for site characterization and analysis that will identify specific site hazards and aid in determining appropriate control procedures. Required information for site characterization and analysis includes:

- Description of the response activity or job tasks to be performed;
- Duration of the planned employee activity;
- Site accessibility by air and roads;
- Site-specific safety and health hazards;
- Hazardous substance dispersion pathways; and
- Emergency response capabilities.

All contractors will receive applicable training, as outlined in 29CFR 1910.120(e) and as stated in the SHSP. Copies of Training Certificates for all site personnel will be attached to the SHSP. Personnel will initially review the JSA forms at a pre-entry briefing. Site-specific training will be covered at the briefing, with an initial site tour and review of site conditions and hazards. Records of pre-entry briefings will be attached to the SHSP.

Elements to be covered in site-specific briefing include: persons responsible for site-safety, site-specific safety and health hazards, use of PPE, work practices, engineering controls, major tasks, decontamination procedures and emergency response. Other required training, depending on the particular activity or level or involvement, may include MSHA 40-hour training and annual 8-hour refresher courses. Other training may include, but is not limited to, competent personnel training for excavations and confined space, first aid, and cardio-pulmonary resuscitation (CPR). Copies of the 40-hour and annual refresher certificates, for site personnel, will be attached to the SHSP.

The individual JSA for the Waste Rock Areas work incorporates individual tasks, the potential hazards or concerns associated with each task, and the proper clothing, equipment, and work approach for each task. The following table outlines the tasks and associated potential hazards that are included in the Waste Rock Area JSA:

SEQUENCE OF BASIC JOB STEPS	POTENTIAL HAZARDS
1. Collect solid materials samples	• Skin irritation from dermal or eye contact • Steep slopes, hard, sharp, irregular surfaces on all WRAs
2. All Activities	• Slips, Trips, and Falls
3. All Activities	• Back, hand, or foot injuries during manual handling of materials.
4. All Activities	• Heat exhaustion or stroke.
5. All Activities	• Hypothermia or frostbite
6. Unsafe conditions.	• All potential hazards.

A copy of the Waste Rock Area JSA is provided in Appendix C.

SECTION 4.0

REFERENCES CITED

Applied Hydrology Associates, May 1983, *Evaluation of Water Quality and Solids Leaching Data*, prepared for Ananconda Minerals Company.

March 2002, *2001 Annual Monitoring and Operation Summary*, prepared for Atlantic Richfield Company.

Arimetco Mining, Inc. (ARCO) 1992/1993?, *Site Assessment of Phase-IV Slot and VLT Leach Pad Areas*

Brown and Caldwell, 2002, *Yerington Mine Site Closure Scope of Work*, prepared for Atlantic Richfield Company.

Huxel, C.J., Jr., 1969, *Water Resources and Development in Mason Valley, Lyon and Mineral Counties, Nevada, 1948-1965*, Nevada Division of Water Resources Water Resources Bulletin No. 38, prepared in cooperation with the U.S. Geological Survey.

Nevada Division of Environmental Protection – Bureau of Corrective Actions (NDEP), November 1999a, *Field Sample Plan*, prepared in for the U.S. Environmental protection Agency, Region IX, Superfund Division.

Proffett, J.M. and Dilles, J.H., 1984, *Geologic Map of the Yerington District, Nevada*, Nevada Bureau of Mines and Geology Map 77.

Rose, A.W., Hawkes, H.E. and Webb, J.S., 1979, *Geochemistry in Mineral* Exploration, Academic Press, New York, NY, 657 p.

Shacklette, H.T. and Boerngen, J.G., 1984, *Element Concentrations in Soils and Other Surficial Materials of the Conterminous United* States, U.S. Geological Survey Professional Paper 1270.

Steffen, Robertson, & Kirsten (SRK), 2002, personal communication with and field records from site water management personnel; Joe Sawyer, Gary Snyder, and Ron Hyatt

United States Environmental Protection Agency (USEPA), October 2000 Expanded Site Inspection.